

## Re-assembly

Having fitted the barrel and movement assemblies into the frame, you may wish to do a trial fit of the motor into the frame to see if the winding pawl on the motor is engaging properly with the barrel. You will also get a better idea of how the motor engages with it's front pivot. Remember the pendulum is still free so work with EXTREME CARE.

Remove the motor, set the two hand poising weights to 6 o'clock and re-fit the frame into the case. As soon as you have the frame back in the case stand the clock up, and fit the hands pointing to 12 o'clock. Unlock the pendulum and check to see that it is still in beat. If not, adjust it. Once the motor is in, you can neither see nor adjust this! Now wind the mainspring up 6 full turns and set the clock running and test it for several days before fitting the motor.

In my clock the winding pawl on the motor would not engage with barrel ratchet wheel. It was too far away. The tip of the pawl should be 17mm from the motor pivot. The post the pawl is fitted to can be turned to adjust this.

Re-fitting the drum is the reverse of the removal. You will need to unlock and lift the pendulum to clear the motor front pivot as you swing the motor in. Lock the pendulum.

Refit the back strap, rotate the motor both ways and listen for sounds of the ratchet engaging. If it does not engage, use a probe or screwdriver to pull the ratchet spring loop away from the centre and allow it to fall back on to the barrel. Check again. Now rotate the drum back and forth to wind the clock fully before putting it on test. I usually get 400 or more degrees of rotation of the balance.

### Some useful details

A punch to remove the centre arbour front jewel setting can be made 1.7mm dia by 8mm long.

The mainspring is 170cm long, 7.25mm wide and 0.12mm thick.

The centre arbour pivot (they get broken!) is 4.3mm long, 0.71mm tapering to 0.66mm dia.

1 degree temperature change should give 120 hours of power.

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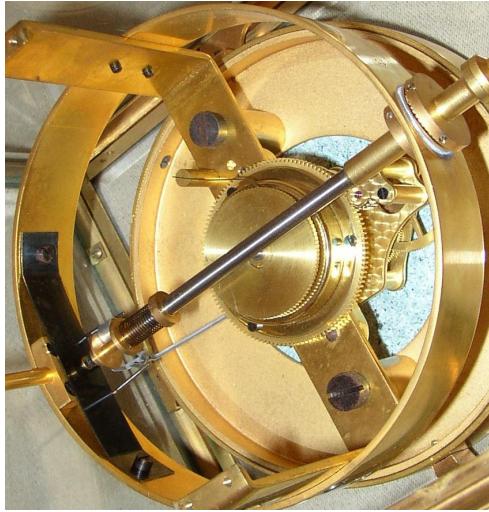
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March 2004.

Version 2.0



## DISMANTLING AND RE-BUILDING THE REUTTER ATMOS

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This is Reutter Atmos 0158. Model GM1 according to Jaeger le-Coultre. Built in 1936 by Le-Coultre, probably from parts made by Reutter in about 1930. It has the usual Reutter mercurial motor and a Le-Coultre movement. The case is moulded glass by Rene Fontayne and the only access to the innards is by removing the back plate. When I came to service this clock I found that I could not remove the mercurial motor to reach the movement and nowhere could I find any instructions on servicing a Reutter. Hence this manual. My thanks go to Rod Fryatt and John Hubby both of whose advice was invaluable.

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March 2004



The back removed.

Throughout this guide I assume the reader is experienced in servicing Atmos clocks. I will explain how to dismantle and rebuild this clock. Servicing is essentially the same as any other Atmos. If you are not experienced on the Atmos, then take the clock to someone who is, before you damage it.

Before you do anything else to a Reutter, make sure the motor is free on its pivots then let it stand for a few days with the motor exposed and watch to see if the motor rocks in response to changes in temperature. If it doesn't, there is little chance of getting the motor repaired.



- Lock the pendulum.
- Remove the hands.
- Lay the clock on its face.
- Remove the backstrap. (4 screws)



I found a better method of removing the drum, hence the picture of a different clock.

Unlock the pendulum. Lift the drum 5mm, away from the dial, to disengage the front pivot. Move it 5mm towards the balance. Rotate the drum right side down and left side up and remove.

Lock the pendulum.

Let down the mainspring (control the barrel & release the ratchet)

Loosen the 2 large movement screws.

Unlock the pendulum.

Remove the 2 screws.

Remove the movement frame & pendulum.

The pendulum is surprisingly rugged but exercise EXTREME CARE.



Support the frame safely on four 60mm blocks.

Remove the movement (2 screws).

Remove the barrel bridge (2 screws).



Remove the barrel and service the clock in the same way as any other Atmos. Make sure you check the poise of the pallets and fork assembly. Mine was off and I had to take it apart again!

Put the frame and pendulum back in the case to store it safely. If you leave the pendulum unlocked, you can let it settle and then check that it is in beat.